The synonymy of Nonagria neurica Hb. = arundineta Schmidt = dissoluta Tr.

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In the "Stettiner Zeitung", for 1869, Dr. Staudinger wrote some notes on this species which were translated by Mr. Albt. Müller, and published, April 1870, in the "Entomologist". I gather from that note that the synonymy given there, was adopted in Dr. Staudinger's "Catalog", published directly afterwards.

This being so, I find that Dr. Staudinger, in his "Catalog", treats our British specimens, as dissoluta Tr. var. arundineta Schmidt, as he gives England as a locality for that species but not for neurica Hb.

In the two English counties, Norfolk and Cambridge, we get a species which has been variously known as neurica Hb., arundineta Schmidt and dissoluta Tr. Dr. Staudinger has, apparently, come to the conclusion that neurica Hb. is unknown in England, and that it is a species distinct from arundineta Schmidt.

There is no doubt that neurica Hb., fig. 381, represents a form which occurs in England; the distinct occllus so characteristic of Hübner's fig. 381 is well developed. Our specimens of this form are simply a little redder than Hübner's figure.

Another variety of the same species, taken in England with the form described above (neurica Hb.), is undoubtedly arundineta Schmidt. According to Dr. Staudinger's own list we, in England, get arundineta Schmidt. If so, our arundineta is certainly only a variety of Hübner's neurica. We do not now get dissoluta Tr., but if this and arundineta are, as Dr. Staudinger and others agree, only varieties of the same species, then arundineta and dissoluta are both varieties of Hübner's neurica, fig. 381.

I have no doubt that Dr. Staudinger is wrong in separating these varieties. Certainly Hübner's neurica and Schmidt's arundineta must be grouped together, and since he himself groups dissoluta with arundineta, it follows that Treitschke was perfectly correct in treating all three forms in his collection as one species, neurica Hb.

So far as our English specimens therefore are concerned, the synonymy must be:

neurica Hb., 381.

var. dissoluta Tr., V, 2, 319.

var. arundineta Schmidt, Stett. entomol. Zeit. 1858, 369.

I should like to offer a few remarks on the principal points of difference relied on by Schmidt, "Stettiner Zeitung", 1858, p. 367. He writes: "The difference.... is less in the markings than the different structure of the body and the wings. Neurica Hb., is the more slender. arundineta the more robust form." Our specimens of neurica, and its var. arundineta vary very much in the shape of the wings. Some specimens have the wings quite pointed, some very much rounded, and this of course makes a great deal of difference in general appearance, and makes the extreme forms in the one direction appear more robust than the extreme forms in the opposite direction. Schmidt then writes: "The colour of both forms varies in the same manner, but arundineta has a dark spot on the underside of each wing, which neurica never has." This is quite correct; I find the paler specimens (neurica) of our species have no dots, whilst the darker var. arundineta have them very distinctly, but I find that these spots are directly proportional to the depth of colouring on the upper surface, and that a complete gradation occurs. Schmidt also writes: "Neurica is on the wing 3-4 weeks earlier than arundineta. This is no proof of distinctness. Mr. W. Warren, F. E. S., writes in the "Entomologists' Monthly Magazine", Vol. XXII, p. 256: "At the beginning of August, Nonagria neurica was abundant; near Cambridge I have never taken it before August, but in the Norfolk fens, I am told it is out during the second half of July." This shows that in two adjacent English counties, in localities only a few miles apart there is a difference of 2—3 weeks in the time of appearance. With regard to the statement of Schmidt as to his failure in pairing a neurica with arundineta, it proves nothing, as the & may have partly lost its vitality. Such a thing often occurs when one breeds lepidoptera on a large scale.

The natural history of the species in England entirely upsets Schmidt's theory of distinction, and disposes effectually

of all his chief arguments.